

Appl. No. 10/657,230
Amendment dated: June 28, 2004
Reply to OA of: March 1, 2004

REMARKS

Applicants have amended the appropriate paragraphs on pages 5 and 6 of the specification in accordance with the Examiner's suggestion set forth on page 2 of the Official Action. Accordingly, it is most respectfully requested that this objection to the specification be withdrawn.

Claims 1 and 15 have been amended to provide "comprising" and avoid the claim objection set forth at the bottom of page 2 of the Official Action. Accordingly, it is most respectfully requested that this objection be withdrawn.

Applicants acknowledge with appreciation the indication that claims 2-4, 5-6 and 17-20 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicants have amended the claims to more particularly define the subject matter as supported by Applicants's specification as originally filed. Claims 2, 5 and 17 have been canceled from the application without prejudice or disclaimer and new claims 29-53 have been added to the application as fully supported by Applicants' specification. It is believed that all of the claims now present in the application are in full compliance with 35 USC 112 and clearly patentable over the references of record.

The rejection of claim 1 under U.S.C. 102(a) as being anticipated by Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") has been carefully considered but is most respectfully traversed.

Applicants wish to direct the Examiner's attention to MPEP § 2131 which states that to anticipate a claim, the reference must teach every element of the claim.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis*

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verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed.Cir. 1990).

In the Official Action it is urged that Fusaro discloses in Figs. 1-IA and 5, a flip chip package (55) comprising a lead frame, a chip/a flip chip IC device (56) and a plurality of first and second bumps (23). However, with reference to Fig. 5 and related text as set forth in column 6, line 8-50, Fusaro discloses a planar nonconductive sheet (17) disposed between the IC device (56) and the lead frame (11+14). In Fusaro, the bumps (23) didn't directly contact with the lead frame (11+14). The metal trace (59), circular metal land (64) and metal via (63) are provided for connecting the bumps (23) to the lead frame (11+14). The above elements are unnecessary in the application, so the application can provide a package thinner than those disclosed in the Fusaro. Accordingly, Applicants submit that independent claim 1 as now amended is allowable over this reference and this aspect of the rejection should be withdrawn.

Claims 7, 8 and 10-12 depend from claim 1 and as such are also considered to be allowable. Accordingly; it is most respectfully requested that this aspect of the rejection be withdrawn.

The rejections under 35 USC §103 have been carefully considered but are most respectfully traversed. Applicants do not believe that a *prima facie* case of obviousness has been established. In this regard the Examiner's attention is directed to the basic requirements of a *prima facie* case of obviousness as set forth in the MPEP § 2143. This section states that to establish a *prima facie* case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

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Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claim 9 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Lo et al. (USP: 6,282,094 herein after referred to as "Lo"). This rejection is respectfully traversed. Since claim 9 depends from claim 1 which is now allowable, claim 9 is also considered to be allowable.

Claim 13 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Corisis (USP: 6,314,639). This rejection is respectfully traversed. Since claim 13 depends from claim 1 which is allowable, claim 13 is also considered to be allowable. Accordingly, it is most respectfully requested that this rejection be withdrawn.

Claim 14 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Akasaki et al. (USP: 5,217,922 herein after referred to as "Akasaki") . This rejection is respectfully traversed. Since claim 9 depends from claim 1 which is allowable, claim 9 is also considered to be allowable.

Claim 15 stands rejected under U.S.C. 103(a) as being anticipated by Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Liang (USP: 5, 378, 924) . The rejection is respectfully traversed.

The Examiner states that Fusaro discloses in Figs. 1-1A and 5, which teaches a flip chip package (55) comprising a lead frame, a chip/a flip chip IC device (56) and a plurality of first and second bumps (23), and Liang discloses in Fig. 5, which. teaches a lead frame (60) has tie bars (61a-61d) connected to the die-attach paddle (62). However, in Fusaro, with reference to in Fig. 5 and related texts as set forth in column

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6, line 8-50, Fusaro discloses a planar nonconductive sheet (17) disposed between the IC device (56) and the lead frame (11+14). In Fusaro, the bumps (23) didn't directly contact with the lead frame (11+14). The metal trace (59), circular metal land (64) and metal via (63) are provided for connecting the bumps (23) to the lead frame (11+14). The above elements are unnecessary in the application, so the application can provide a package thinner than those disclosed in the Fusaro. Moreover, see FIG. 3 of the application, the surface area of the chip (35) is almost that of the lead frame (31). This is so-called chip scale package (CSP), which is different from the packages disclosed in Fusaro. Accordingly, Applicants submit that independent claim 15 is allowable over the references and it is most respectfully requested that the rejection of this claim and any claims dependent thereon be withdrawn.

Claims 16, 21, 22 and 24-26 depend from claim 15 as such are also considered to be allowable.

Claim 23 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Liang (USP: 5,378,924) and further in view of Lo (USP: 6,282,094 herein after referred to as "Lo"). This rejection is respectfully traversed. Since claim 23 depends from claim 15 which is allowable, claim 23 is also considered to be allowable.

Claim 27 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Liang (USP: 5,378,924) and further in view of Corisis (USP: 6,314,639). This rejection is respectfully traversed. Since claim 27 depends from claim 15 which is allowable, claim 27 is also considered to be allowable.

Claim 28 stands rejected under U.S.C. 103(a) as being unpatentable over Fusaro et al. (USP: 6,331,451 herein after referred to as "Fusaro") in view of Liang (USP: 5,378,924) and further in view of Akasaki et al. (USP: 5,217,922 herein after referred to as "Akasaki"). This rejection is respectfully traversed. Since claim 28 depends from claim 15 which is allowable, claim 28 is also considered to be allowable.

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It is gratefully acknowledged that the Examiner considers the subject matter of claims 2-4, 5-6 and 17-20 as being allowable. Although while not conceding the appropriateness of the Examiner's rejections, applicants add new claims 29-54, which are rewritten from the ordinary claims 1-28. Accordingly, claims 29-54 are now in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

In view of the above comments and amendments to the specification and claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

BACON & THOMAS, PLLC

By: Richard E. Fichter
Richard E. Fichter
Registration No. 26,382

625 Slaters Lane, 4th Fl.
Alexandria, Virginia 22314
Phone: (703) 683-0500
Facsimile: (703) 683-1080

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